RESOURCE MANAGEMENT

Management of Forest Service Recreation Sites

A Public Preference Study

Province of
British Columbia
Ministry
of Forests

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A Public Preference Study

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Foreword

The British Columbia Forest Service maintains a province wide network of recreation sites and trails. Low-keyed and rustic, but sometimes heavily used, sites have been established in areas of high public use (e.g. lake shores) so people can enjoy these areas in safe, sanitary, socially acceptable and environmentally sound ways.

This is the first formal study carried out by the Forest Service to assess public preferences for recreation sites on B.C.'s public forest lands. The results of this study will help guide Forest Service staff in managing these sites.

This report documents and interprets the results of focus group meetings, a telephone survey, and an interagency workshop involving recreation managers from a number of government agencies and recreation organizations. This report includes a number of policy implications regarding the management of Forest Service recreation sites.

The **Executive Summary** highlights the key study findings and policy implications.

Section 1 presents the objectives of the study and an overview of the methodology.

Section 2 presents the results of the focus group meetings, telephone survey and interagency workshop.

Section 3 discusses and interprets the key results.

Section 4 sets out a number of policy implications for the management of Forest Service recreation sites.

Section 5 presents the methodology for the focus group meetings, telephone survey and interagency workshop.

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We wish to especially thank those individuals who committed their time to participate in the focus group meetings, the telephone survey and the interagency workshop.

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Executive Summary

The B.C. Forest Service maintains a province-wide network of recreation sites and trails. Low-keyed and rustic, but sometimes heavily used, sites have been established in areas of high public use (e.g. lake shores) so people can enjoy these areas in safe, sanitary, socially acceptable and environmentally sound ways.

In the fall of 1990 a study was carried out to explore what B.C. residents want from Forest Service recreation sites. This study included four focus group meetings, a telephone survey of over 800 B.C. residents and an interagency workshop.

Interpretation of the results provided policy implications for managing Forest Service recreation sites in order to meet the needs and desires of the public.

The major findings of this study are:

Key Results and Policy Implications

- *Result:*
  Almost half of all British Columbians use Forest Service recreation sites. Forty-two percent of the respondents to the telephone survey indicated they had used a Forest Service recreation site within the last five years.

  Implication:
  Forest Service recreation sites play a major role in the public's perception of the B.C. Forest Service. Recreation sites are perhaps the most tangible and visible means for the Forest Service to demonstrate that it is managing BC's public forest lands for public recreation use. If recreation sites are positively perceived the Forest Service as a whole will benefit. If, however, recreation sites are negatively perceived public support for the broad range of Forest Service programs can be affected accordingly.

- *Result:*
  The public recognizes and supports the Forest Service niche for recreation sites. The public strongly supports the niche occupied by Forest Service recreation sites among the various outdoor recreation facilities in B.C. This niche can be described as low-keyed and rustic, but sometimes heavily used, sites without user fees.

  Implication:
  Forest Service recreation sites should be designed and maintained according to their recognized niche. Recreation sites should remain "rustic but clean and rustic by design" at each location throughout the province.

- *Result:*
  The public prefers even greater diversity in recreation sites. There is a preference for even greater variety in site design, landscape setting and the recreational opportunities offered within the Forest Service niche.

  Implication:
  Forest Service recreation sites should be designed to provide greater diversity. Public preferences must be considered in designing, constructing and maintaining recreation sites if they are to meet the needs and expectations of the public.

Key Results and Policy Implications (Continued)

- *Result:*
  Where standards are met there is a high level of satisfaction with Forest Service recreation sites. However, where standards are not met there is a high level of dissatisfaction.

  Implication:
  Standards must be maintained to have a "satisfied customer." To achieve user satisfaction, standards must be clearly defined and met in managing Forest Service recreation sites.

- *Result:*
  Rowdyism and vandalism are serious problems at some Forest Service recreation sites. Approximately 30% of respondents indicated the behaviour of others caused them concern.

  Implication:
  Rowdyism and vandalism must be addressed or public satisfaction and safety at these sites will diminish. An effective "visitor management program" is required at certain sites to deal with this problem.

- *Result:*
  A natural setting is important. Most users of Forest Service sites have a greater desire to relax and enjoy nature in a natural setting than they have for being provided with more than the basic services.

  Implication:
  Forest Service recreation sites should be located and designed in keeping with the public's preference for a natural setting. The Forest Service should continue to provide basic amenities and maintain sites to the standard of 'rustic but clean.'

- *Result:*
  There is a strong preference for no user fees at Forest Service recreation sites. The absence of a user fee is likely an important consideration when people choose a Forest Service site over a private or park campground managed for a fee.

  Implication:
  Charging fees would cause major management problems. The introduction of fees for the use of Forest Service sites would be contrary to the underlying purpose of the program and could result in management problems such as the relocation of use to surrounding public and private lands.

1.0 Introduction

The Forest Service recreation program was established in 1971. Its initial priorities were to build recreation facilities and to develop forest landscape management principles and practices.

Facilities were needed because of safety and sanitation problems in areas of high recreation value where the public tended to concentrate. Forest landscape management was needed to address rising public concern over the visual and aesthetic impacts of timber harvesting on B.C.'s scenic landscapes.

New forest legislation in 1978 established recreation as one of the three primary resource management mandates of the Forest Service, along with timber and range. That legislation expanded the role of the Forest Service recreation program to include all aspects of recreation resource management as well as recreation use management.

Amendments to the Forest Act in 1987 recognized wilderness as a distinct resource and legitimate land use. This new responsibility further expanded the recreation program, requiring the Forest Service to manage British Columbia's provincial forests for the full spectrum of recreation opportunities.

Developments since 1971, and current trends in the Forest Service recreation program, indicate:

- A changing perception from recreation as an activity in need of facilities, to recreation as a resource in need of resource-based opportunities.
- A shift in focus from managing roaded recreation opportunities to managing the full spectrum of recreation opportunities.
- A shift from reactive to proactive management of recreation use problems.
- An expansion from primarily a three season program to a four season program.
- An increasing role of public involvement in all aspects of resource management and an increasing importance of communication in recreation management.
- The emergence of commercial recreation (tourism) as a major sector of the British Columbia economy.
- An increasing complexity in recreation management, an increasing number of recreation management programs and a need for greater inter-agency communication and cooperation.
- A continuing expansion of the scope and responsibilities of the Forest Service recreation program.
- Evolving social values and expectations, and changing needs and priorities for recreation management.

While the above legislative changes, developments and trends have continually influenced the scope and direction of the Forest Service recreation program, the program has retained the following responsibility as one aspect of managing recreation use in Provincial Forests:

> *to provide safe, sanitary, socially acceptable and environmentally sound recreation facilities and structures in a variety of forest settings.*

These low-keyed and rustic, but sometimes heavily used, sites are intended to complement the more developed facilities of other agencies and the private sector by providing public recreation opportunities not available elsewhere.

In view of these two considerations — the evolution of the Forest Service recreation program over the past two decades and its role or niche among other agencies in providing recreation facilities and services — the Forest Service recognized the need to canvass public and other agency views regarding the management of its recreation sites.

The purpose of this study, therefore, was to assess public preferences regarding Forest Service recreation sites in order to guide Forest Service recreation staff in managing these sites.

1.1 Objectives

The objectives of this study were to:

- Define the role or niche of Forest Service recreation sites compared to facilities provided by other recreation management agencies.
- Assess social, environmental and physical management considerations for Forest Service sites.
- Examine design considerations for Forest Service sites.
- Establish public priorities and needs for information about Forest Service sites.
- Identify any changes required to satisfy "unsatisfied" users, and the implications of such changes.

1.2 Overview of methodology

The study was conducted in three phases:

- First, four focus group meetings were held in various parts of the province to gain insight into concerns facing agencies and the public regarding Forest Service site management. Based on these meetings a telephone survey questionnaire was designed.
- Second, a telephone survey consisting of telephone interviews with adult residents of British Columbia was carried out. 404 users and 442 non-users of Forest Service recreation sites throughout B.C. were selected at random for these interviews.
- Third, an interagency workshop was held in Victoria with representatives from the B.C. Forest Service, BC Parks, the Ministry of Tourism and the Outdoor Recreation Council of British Columbia. The findings of the focus group meetings and the telephone survey were discussed.

This report documents and interprets the results of the focus group meetings, telephone survey and interagency workshop. It also sets out a number of policy implications regarding the management of Forest Service sites.

2.0 Results

2.1 Motives for visiting Forest Service recreation sites

This section presents the reasons why residents use Forest Service recreation sites. All those interviewed were asked to consider the type of experience that should be provided at a Forest Service site, as distinct from the type of experience that could be found at a National Park, Provincial Park, or private campground.

The results are found in Table 1.

Table 1 shows:

- The most important motives were relaxing, enjoying nature and the outdoors, and enjoying natural features.
- The least important motive was to meet new people.
- There is little difference between the responses of users and non-users. Even with respect to the four items where responses were significantly different (indicated with an asterisk*), the magnitude of the differences in mean responses was limited.
- The pattern of results is generally similar to results obtained from recent studies conducted with visitors to National Parks and Provincial Parks. This suggests that people may be seeking similar kinds of experiences in Forest Service sites, although perhaps at a lower cost, or closer to home.

Table 1: Comparison of Motives — Users and Non-Users

Motive	Importance of Motive[1]	
	Users (n=404)	Non-Users (n=442)
To relax and get away from it all	2.84	2.77*
To enjoy nature and the outdoors	2.83	2.80
To enjoy activities with family or friends	2.68	2.67
To feel a sense of adventure or challenge	2.29	2.20
To experience a feeling of wilderness	2.57	2.39*
To learn more about nature	2.45	2.42
To develop outdoor skills	2.17	2.14
To meet new people	1.70	1.91*
To enjoy natural features such as scenery and wildlife	2.78	2.73
To get some privacy or solitude	2.64	2.49*
To get some physical exercise	2.51	2.45
To feel safe and secure	2.40	2.42
To see an environment unchanged by people	2.70	2.62
To feel independent and self-reliant	2.44	2.39
To be free of rules and regulations	2.07	2.00

[1]Motive importance was measured on a 3-point scale, where 1 = 'not important"; 2 = "somewhat important"; and 3 = "very important".
*Indicates a significant difference in mean response.

2.2 Satisfaction of users of Forest Service recreation sites

This section measures the satisfaction of users of Forest Service recreation sites by comparing two criteria:

1. the relative importance of various motives to users, and,
2. their experience during visits to Forest Service sites.

Most of the respondents who had visited a Forest Service site had done so within the past five years. These people were asked to reflect upon their most recent visit, and indicate if it was the type of experience they desired.

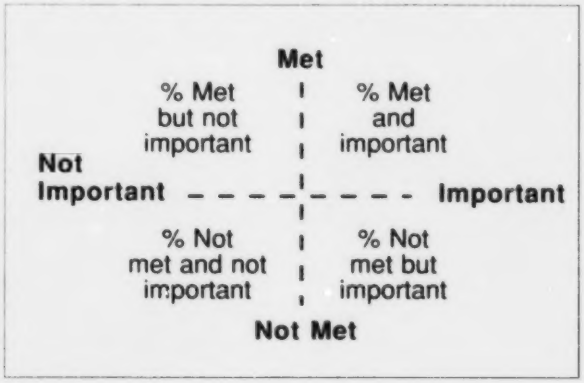
The results are shown in Table 2.

Table 2 shows:

- Respondents indicated they were satisfied concerning most of their motives for visiting Forest Service sites.
- Some dissatisfaction was indicated with respect to the following motives: learning more about nature, developing outdoor skills, and seeing an environment unchanged by people. These are items rated as important, but not achieved, by a number of people.
- Some dissatisfaction was also indicated with respect to the motives of meeting new people, and being free of rules and regulations. However, not as many people rated these motives as important.

Notes on using Table 2:

Each motive is broken into four quadrants indicating the importance of the motive to visitors as well as their experience; whether or not the motive was met.



For example, consider the motive of relaxing and getting away; 94.3% of users indicated this motive was both important to them and had been met in their visit to a Forest Service site (upper right quadrant of the first figure). 3.7% of the users said this motive was important, but had not been met (lower right quadrant). This example indicates a high level of visitor satisfaction for this particular experience.

Table 2: Motives and Experiences of People Visiting Forest Service Sites

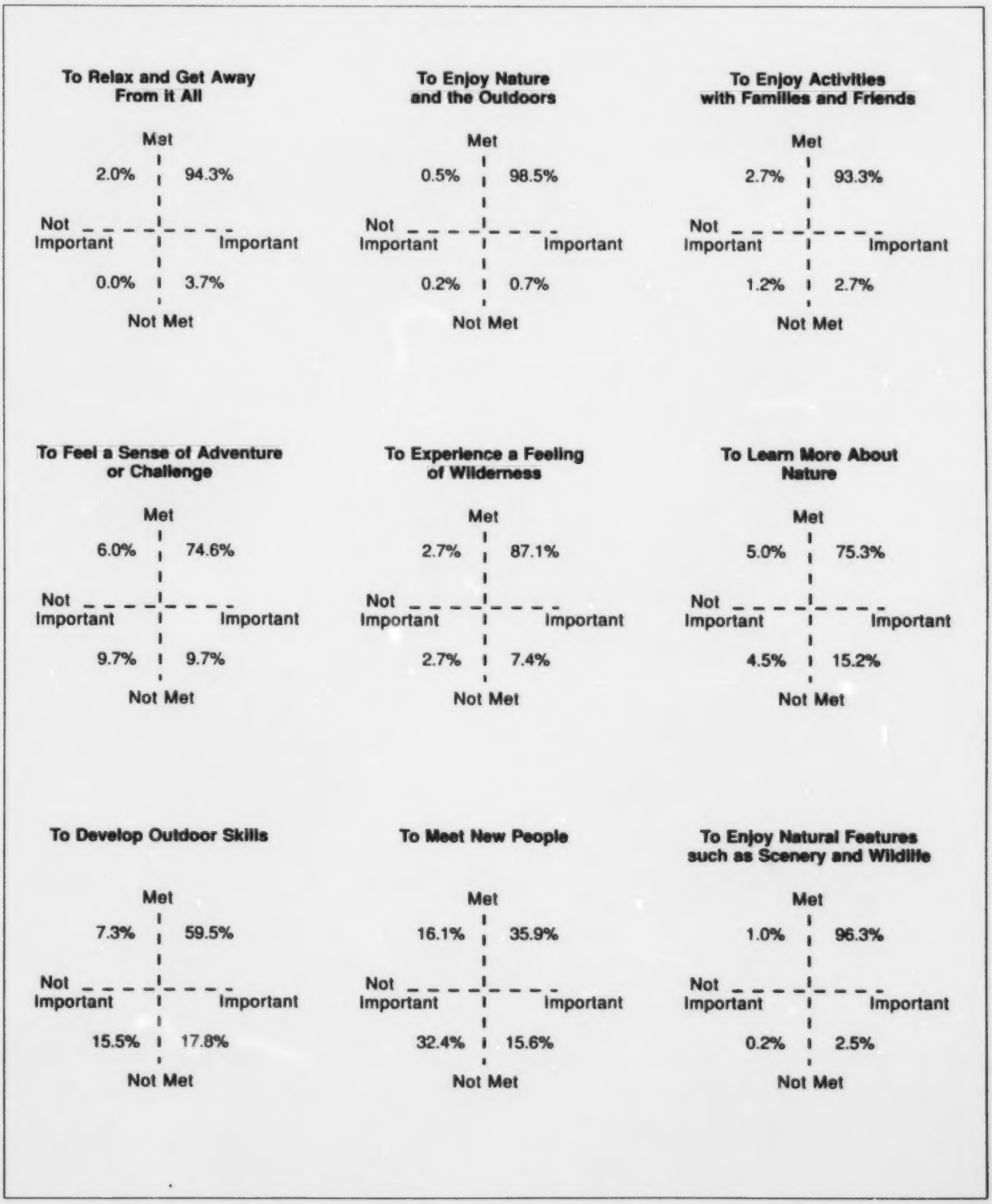
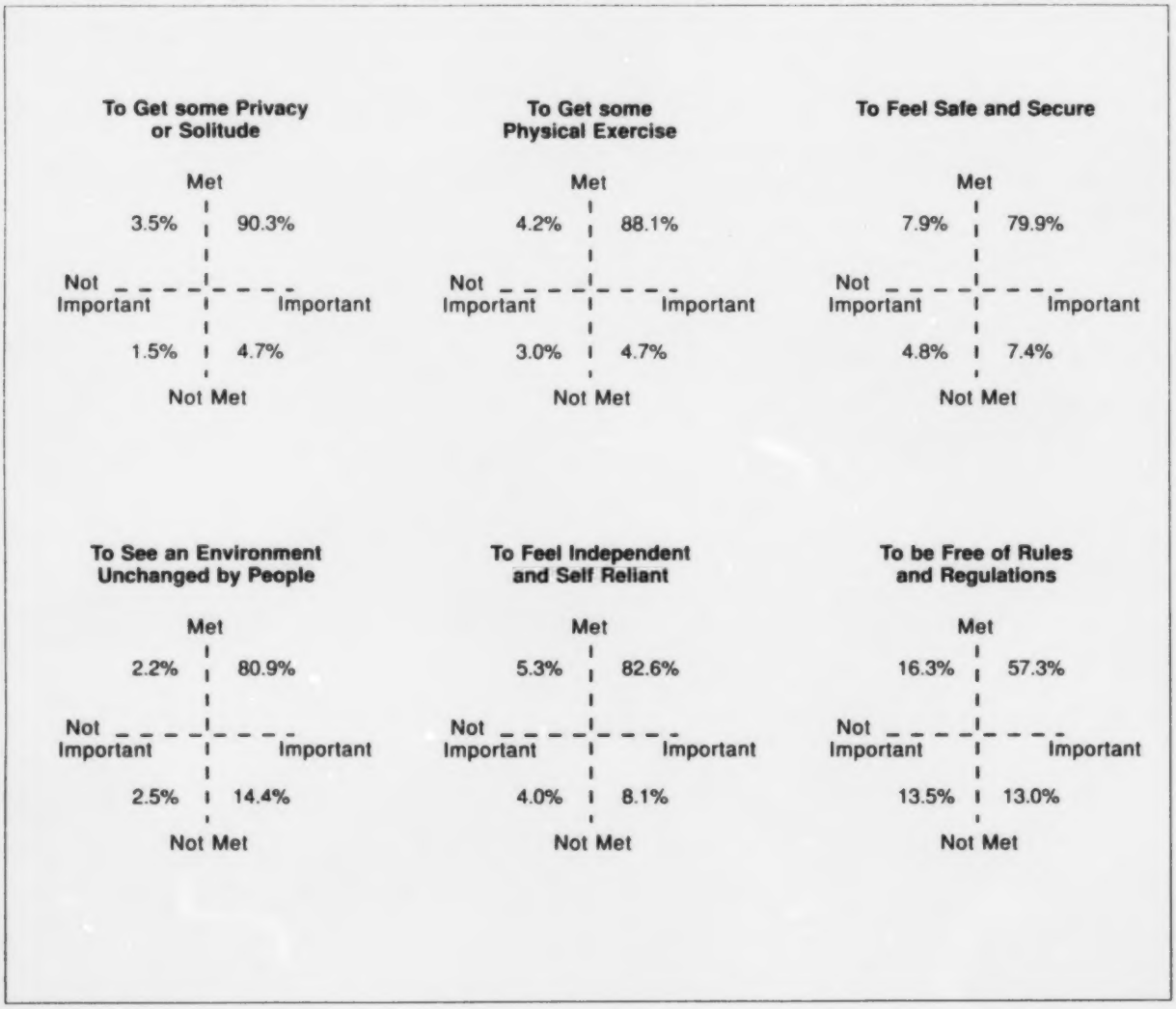


Table 2, Continued



2.3 Preferences for services and facilities

This section reports the importance of various services and facilities to respondents.

The results are found in Table 3.

Table 3 shows:

- Most services and facilities are rated as important, with the exception of tent pads, cooking shelters, on-site supervision, and interpretation services, which are less important. These are mean responses, however, and some people might consider these items very important.
- Non-users tend to rate many services and facilities as more important than do users. This is particularly true of tent pads, cooking shelters, on-site supervision, and interpretation services. Since these are the facilities and services people might expect to find in a park or commercial campground many non-users might be better served in a location of this type rather than a Forest Service site.

Table 3: Comparison of Motives — Users and Non-Users

Service/Facility	Mean Preference Rating[1]	
	Users (n=404)	Non-Users (n=442)
Tent pads	1.71	2.08*
Picnic tables	2.17	2.24
Fire pits	2.51	2.51
Firewood	2.35	2.37
Garbage removal service	2.47	2.50*
Cooking shelters	1.49	1.80*
On-site supervision	1.69	2.00*
Interpretation services, such as nature talks	1.65	1.86*
Campsites near a lake or other body of water	2.59	2.47
Campsites screened from each other	2.25	2.20
Campsites with a waterfront view	2.22	2.14
Disabled access	2.33	2.35
Maintained trails	2.32	2.37
Access to drinking water	2.75	2.72
Outhouses	2.75	2.71

[1]Preferences was measured on a 3-point scale, where 1 = "not important"; 2= "somewhat important"; and 3 = "very important".
*Indicates a significant difference in mean response.

2.4 Naturalness of recreation settings

This section reports the acceptability of non-recreational use in a recreation site setting.

Since Forest Service recreation sites are often located near areas that have been logged or used for other purposes, users and non-users were asked to indicate their opinions about outdoor settings that range from pristine to highly modified.

The results are found in Table 4.

Table 4 shows:

- Average acceptability or desirability tended to drop as the amount of logging in the area became more evident. There was considerable variability in responses, however, with some people clearly more tolerant of logging activities than others.
- Culturally modified environments were acceptable to a large number of people, even though this may represent a dramatic change from a pristine forest setting. This suggests that it is not logging per se that many people find objectionable, but the perception that logging may be damaging an area or that recent extensive logging, without the benefit of visually effective green-up, may not be as pleasant to view as an area that has been converted to farming or ranching.
- There was little difference in the responses of users versus non-users.

Table 4: Naturalness of Recreation Setting — Users and Non-Users

Type of Recreation Setting		Response: Unacceptable 1	Acceptable 2	Desirable 3	Mean Response
A natural environment that has never been logged or altered by people	Users	2.0%	33.2%	63.6%	2.64
	Non-users	3.4	35.5	58.6	2.59
A natural appearing setting; for example; an area that may have been logged once, but has since grown over and no longer looks as though it had been logged.	Users	2.7	50.0	46.8	2.45
	Non-users	6.1	53.8	38.2	2.33*
A natural setting where modification or change is evident; for example, an area that has been logged in the past but has not yet completely revegetated	Users	34.2	56.9	6.7	1.77
	Non-users	34.6	55.4	5.9	1.79
A natural setting where modification or change is extensive; for example, areas that have been recently logged, and no new growth has yet begun	Users	69.6	24.5	4.5	1.38
	Non-users	74.0	19.9	4.1	1.34
A natural setting that is culturally modified or changed, such as farmland, ranches, or utility corridors	Users	36.1	53.2	6.4	1.78
	Non-Users	34.6	50.9	9.7	1.84

*Indicates a significant difference in mean response.

2.5 Information needs

This section reports the importance respondents attached to various types of information, from weather conditions to availability of campsites.

The results are found in Table 5.

Table 5 shows:

- All of the information items were considered important by most users and non-users.
- The most important types of information were directions to the area, safety warnings, campsite availability, road conditions, location of emergency facilities, and weather forecasts.
- The least important types of information were about points of interest, services and facilities, rules and regulations and trail conditions.
- Non-users assigned a higher level of importance to seven out of ten information items than did users, including weather conditions, directions to the area, safety hazards, services and facilities, location of emergency facilities, rules and regulations, and trail conditions. Some non-users may have decided not to visit Forest Service sites because of a lack of information about them.

Table 5: Information Needs — Users and Non-Users

Type of Information		Response			
		Not Important 1	Somewhat Important 2	Extremely Important 3	Mean Response
Weather conditions	Users	18.3%	28.0%	53.5%	2.36
	Non-users	12.2	29.4	57.7	2.47
Directions to the area	Users	8.2	23.3	68.6	2.60
	Non-users	2.9	22.9	73.8	2.72*
Points of Interest	Users	15.6	44.8	39.1	2.25
	Non-users	9.3	49.1	40.7	2.32
Safety hazards	Users	9.2	31.4	58.7	2.51
	Non-users	4.1	23.3	71.9	2.68*
Services and facilities	Users	18.6	41.3	39.4	2.22
	Non-users	8.1	40.0	50.2	2.44*
Location of emergency facilities	Users	18.3	28.0	53.5	2.46
	Non-users	12.2	29.4	57.7	2.75*
Rules and regulations	Users	17.6	39.4	42.8	2.26
	Non-users	9.0	38.9	51.6	2.42*
Road conditions	Users	7.4	37.9	54.7	2.47
	Non-users	5.2	38.9	55.4	2.51
Trail conditions	Users	18.8	46.0	34.2	2.16
	Non-users	9.5	49.5	40.3	2.32*
Availability of campsites	Users	9.7	24.8	65.3	2.56
	Non-users	4.3	33.3	61.3	2.59

* Indicates a significant difference in mean response.

2.6 Definition of user types (market segments)

This section reports the preferences of users for various services and facilities at Forest Service sites and defines user groups according to their preferences.

Forest Service site users were grouped into three different "market segments" based on their outdoor recreation preferences using cluster analysis, a statistical technique.

The results are found in Table 6.

Table 6 shows:

- The first two of the three cluster groups (clusters 1 and 2) are fairly large and have quite different preferences. The third group (cluster 3) is smaller, and tends to fall in the mid-range with respect to preferences for services and facilities.
- Cluster 1 users prefer fewer services and facilities. This group is particularly low in their rating of the following: tent pads, picnic tables, provision of firewood, cooking shelters, on-site supervision, interpretive services, and a maintained trail system.
- Cluster 2 users have a higher preference for services and facilities. Group preferences are particularly high for the following: picnic tables, fire grates, provision of firewood, garbage removal facilities, disabled access, maintained trail systems, and close access to drinking water.
- Cluster 3 users have preferences that place them between cluster 1 and cluster 2. This group is unique, however, in attaching less importance to the following: having a campsite near water; having a campsite with a waterfront view; and having a garbage removal service.

Recreation Opportunity Spectrum

The Forest Service has adopted the Recreation Opportunity Spectrum (ROS) as an underlying conceptual framework for planning and managing recreation on public forest lands. The principle underlying ROS is that people vary in their preferences for types of outdoor recreation experiences.

These preferences can be classed according to recreation settings along a continuum from "primitive" to "rural". Management can shape recreation experiences and settings by managing for this diversity by controlling a number of factors; for example, access, non-recreational resource use, services and facilities, social interaction, supervision, and recreational impacts. The anticipated outcome of using ROS is a close match between the conditions at recreation sites

Table 6: Cluster Groups Defined by Preferences for Services and Facilities (Users)

Service/Facility	Mean Preference Rating[1]		
	Cluster 1 (n = 104)	Cluster 2 (n = 221)	Cluster 3 (n = 49)
Tent pads	1.3	1.85	1.55
Picnic tables	1.65	2.47	1.84
Fire pits	2.02	2.77	2.41
Firewood	1.73	2.65	2.16
Garbage removal service	2.27	2.72	1.84
Cooking shelters	1.17	1.74	1.18
On-site supervision	1.34	1.95	1.35
Interpretation services, such as nature talks	1.28	1.88	1.31
Campsites near a lake or other body of water	2.72	2.7	1.94
Campsites screened from each other	2.22	2.28	2.16
Campsites with waterfront view	2.27	2.35	1.69
Disabled access	1.19	2.52	2.1
Maintained trails	1.84	2.54	2.2
Access to drinking water	2.35	2.95	2.67
Outhouses	2.71	2.04	2.91

[1] Preference measured on a 3-point scale, where "not important" = 1; "somewhat important" = 2; and "very important" = 3

2.7 Forest Service recreation site management problems

This section examines the level of user satisfaction with Forest Service sites.

Users were asked to reflect on their most recent visit to a Forest Service site, indicating any problems they could recall and the seriousness of those problems.

The results are found in Table 7.

Table 7 shows:

- Problems considered serious by the greatest number of respondents were as follows: noise from other people (9.2%), too many people (9.2%), and not enough firewood (8.2%).
- Problems considered minor by the greatest number of respondents were as follows: not enough firewood (20.3%), sites were difficult to find (19.8%), and noise from other people (19.6%).
- Problems considered both serious and minor by the greatest number of respondents were as follows: noise from other people (28.8% combined), not enough firewood (28.5% combined), and too many people (25.5% combined).
- Over 66.3% of the visitors indicated there was no problem at the site they had visited.
- These results do not reflect conditions at all Forest Service sites. They do indicate, however, that site evaluation studies, as carried out by B.C. Parks and the Canadian Park Service in B.C., would provide useful additional information.

Table 7: Problems with Forest Service Sites as Perceived by Users

Problem Area	Mean Preference Rating[1]				
	Not a problem	Minor problem	Serious Problem	Don't know	Mean[1]
Sites were difficult to find	73.3%	19.8%	0.5%	1.0%	1.30
Sites were not clean	78.2	15.1	5.7	0.0	1.26
Sites were not well maintained	80.2	15.8	3.0	0.0	1.22
Sites were too primitive	87.4	10.1	1.0	0.5	1.12
Sites were too developed	84.7	12.9	1.2	0.2	1.16
Not enough firewood	66.3	20.3	8.2	4.2	1.39
Noise from other people	69.8	19.6	9.2	0.5	1.38
Too many people	73.5	16.3	9.2	0.0	1.36
Sites were too small for the type of vehicle you have	82.2	12.6	3.7	0.5	1.21
Sites were too large	93.1	4.0	1.0	0.5	1.06
There was danger from wildlife	86.4	9.7	0.2	2.7	1.11
Rules and regulations were not enforced	78.7	13.9	2.5	4.0	1.20
Vandalism of facilities	74.8	16.6	7.7	0.0	1.33
It was too hard to get information about the area	74.0	15.3	6.9	2.7	1.31
Trails were not well maintained	77.5	11.9	2.7	0.9	1.19
Not enough trails	72.8	17.1	2.2	6.9	1.24
Road to the site was not well maintained	77.5	14.9	6.7	0.0	1.29

[1]Mean response computed from a 3-point scale, where 1 = "not a problem"; 2 = "minor problem"; and 3 = "serious problem".

2.8 Carrying capacity considerations

This section reports the concerns of users regarding crowding and the behaviour of others at Forest Service sites. These concerns included noise, vandalism, cleanliness of sites, etc.

The results are found in Table 8.

Table 8 shows:

- The behaviour of others diminished the experience of 30.2% of respondents.
- Resource impacts caused by recreational use diminished the experience of 27% of respondents.
- Noise from other people diminished the experience of 19.6% of respondents.
- Crowding diminished the experience of 16.3% of respondents.
- These results indicate that users and non-users are more concerned about the consequences created by users (environmental impacts, noise, vandalism, etc.) than about the actual number of users.
- One of the most striking observations is that both users and non-users had difficulty estimating crowded conditions. When asked about the number of people that could be encountered each day in a Forest Service site without diminishing the experience, over a third of both users and non-users could not provide an estimate. This result is consistent with other studies that have shown that people are poor estimators of the number of individuals that would make them feel crowded.
- Some people reported feeling crowded in the presence of 1-5 people, and other people didn't feel crowded until they experienced over 80 people.

Limits of Acceptable Change

For many people, the experience at a Forest Service recreation site was diminished somewhat by the behaviour of others (noise, crowding, vandalism, cleanliness of sites, etc.). In the past, these concerns have been examined within a conceptual framework called "recreation carrying capacity". This concept is being replaced by the concept of Limits of Acceptable Change or LAC. Acceptance of LAC immediately redefines the traditional question about carrying capacity from "How much use is too much?" to "How much change is acceptable?" Emphasis is placed on the effects of use rather than on the amount of use.

Various recreation opportunities can be planned for by taking resource, social and managerial condition indicators and standards into consideration and then defining and describing the desired conditions.

Resource managers can use the concept of LAC to help keep the character and rate of change due to human factors within acceptable levels, thereby achieving or restoring these desired conditions. Some potential management actions for reducing the impacts of recreation use are limits on group size and length of stay, seasonal campsite closures, the use of permits, etc.

Table 8: Carrying Capacity Considerations

Item		Response	
		Users	Non-Users
What is the maximum number of people you could encounter each day at a Forest Service recreation site, and still enjoy your experience?	1-5 people	8.2%	9.0%
	6-10 people	16.6	17.9
	11-120 people	21.3	18.3
	21-40 people	7.7	5.4
	41-80 people	4.2	4.3
	Over 80 people	4.0	3.2
	Don't know	36.4	40.3
What is the maximum number of groups you could encounter each day on a Forest Service trail, and still enjoy your experience?	1-5 groups	31.7	36.0
	6-10 groups	12.1	12.4
	11-15 groups	3.7	4.8
	16-20 groups	3.7	2.9
	Over 80 groups	2.5	2.9
	Don't know	42.1	38.2
Has the behaviour of others ever diminished your experience at a Forest Service site?	No	65.6	
	Yes	30.2	
	No Response	4.3	
On your last visit to a Forest Service site, were you concerned about the level of damage caused by recreation use?	No	70.5	
	Yes	27.0	
	No response	2.5	
On your last visit to a Forest Service site, were you concerned about noise from other people?	No	69.8	
	Yes	19.6	
	No response	2.5	
On your last visit to a Forest Service site, were you concerned that too many people were there?	No	73.5	
	Yes	16.3	
	No response	9.2	

2.9 Access to Forest Service recreation sites

This section reports the preferences of respondents regarding vehicle access to Forest Service sites. Factors included the type of access, difficulty of access, and length of time required to reach a site.

The results are shown in Table 9.

Table 9 shows:

- More users (85.1%) found unpaved logging roads an acceptable form of access than did non-users (60.6%).
- Non-users were less willing to travel for long periods of time on unpaved roads to reach a Forest Service site.
- 46.8% of users indicated that the condition of the road would affect the length of time they would be willing to travel on unpaved roads.

Table 9: Preferences Regarding Vehicle Access to Forest Service Sites

Item		Response	
		Users	Non-Users
On your last visit to a Forest Service site, did you travel to the site by mechanized transport, such as car or motorboat; or by non-mechanized travel, such as hiking or canoeing?	**Mechanized** **Non-Mechanized**	93.3% 5.4	
While at a Forest Service site, did you travel off-road by mechanized vehicle?	**Yes** **No**	18.1 80.9	
How do you feel about traveling to Forest Service sites on unpaved logging roads?	**Acceptable** **Not Acceptable**	85.1 14.1	60.6% 37.6
What length of time would you be willing to travel on unpaved roads to reach a Forest Service site?	**Under 1 hour** **1-3 hours** **Over 3 hours** **Non Response**	22.8 34.9 25.0 17.3	21.0 27.6 11.8 39.6
Does the condition of the road have an affect on the length of time you are willing to travel on unpaved roads to reach a Forest Service site?	**Yes** **No** **Non Response**	46.8 38.1 15.1	37.6 23.3 39.1

2.10 Fee considerations

This section reports the findings regarding fee considerations at Forest Service recreation sites.

The results are found in Table 10.

Table 10 shows:

- 83.6% of users felt that it was important that Forest Service sites continue to be available at no charge (very important, 56.4%, and somewhat important, 27.2%).
- 76.9% of non-users felt that it was important that Forest Service sites continue to be available at no charge (very important, 45.9%, and somewhat important, 31%).
- 81.9% of users and 76.9% of non-users indicated they would likely continue to use Forest Service sites if a $2.00 to $5.00 user fees were charged. 17.3% of users and 15.8% of non-users indicated they would not likely use Forest Service sites if such a fee were charged.

User fees

British Columbians have a cultural tradition and expectation of free and unfettered access and recreational use of public forest lands. Since more than 85% of the province is public forest land, many of the most favoured recreation locations are under the jurisdiction of the Forest Service. The Forest Service establishes recreation sites in areas of high public use in response to health, safety, environmental and social concerns.

These Forest Service recreation sites are established to maintain existing opportunities for people to enjoy natural settings free of charge; they are not established to promote or create new opportunities. Many British Columbians have camped alongside a favourite lake or river for years before these locations became Forest Service recreation sites.

Some users and non-users would prefer to have more facilities and services than are currently offered at Forest Service sites. If user fees were imposed to pay for these additional services and facilities, however, existing opportunities to enjoy these natural settings free of charge would be removed.

One of the more important reasons many people use Forest Service sites is that these sites are available, and have always been available, at no charge.

Table 10: Willingness to Pay for Forest Service Sites

Fee Consideration		Response	
		Users	Non-Users
How important is it for the Provincial Government to provide recreational sites to the public free of charge?	Not important	15.1%	19.9%
	Somewhat important	27.2	31.0
	Very important	56.4	45.9
If a small fee were charged for the use of Forest Service sites ($2 to $5), would your be likely to use these sites in the future?	Not likely	17.3	15.8
	Somewhat likely	24.5	33.9
	Very likely	57.4	47.1

Recreation sites — preference study

2.11 1988 B.C. Parks Study

This section reports the findings of the 1988 B.C. Parks province-wide survey that examined public attitudes to camping and showed levels of use in public and private campgrounds.

The results are found in Table 11.

Table 11 shows:

- The main reasons people chose to use Forest Service sites, over other alternatives, were fishing, few restrictions and no fees.
- The main reasons people chose National Park or Provincial Park campgrounds over Forest Service recreation sites were level of maintenance, security and visitor programs.
- The main reasons people chose private campgrounds over Forest Service sites were advance reservations, security, R.V. hookups, level of maintenance and additional services.

Please note:

Of the 4,000 potential respondents in the sample frame the net return rate was 81%.

The number of "recent campers" (people who had camped in 1987) amounted to 1,286 people, or 41% of the sample. The distribution of use among campgrounds was as follows: private campgrounds (15%); National Park campgrounds (10%); Provincial Park campgrounds (40%); and Forest Service recreation sites (16%).

Table 11: Reasons for Campground Use — Results of a B.C. Parks 1988 Study

Reasons for Preference	Type of Campground			
	Private Campground (n = 185)	National Park (n = 122)	Provincial Park (n = 490)	Forest Service Recreation Site (n = 194)
Advance reservations	16.89%	1.36%	2.65%	1.55%
Cost	4.67	10.11	12.58	16.35
Fishing	4.13	4.64	6.19	21.86
Campsite spacing	7.73	20.76	23.11	21.00
Security	10.25	7.10	9.72	1.72
Recreation activities	7.01	7.38	7.07	6.71
Few restrictions	3.42	7.38	3.26	16.69
R.V. hookups	13.67	1.91	1.90	0.52
Additional services	9.89	3.28	1.56	0.34
High maintenance	18.16	20.76	21.55	5.33
Programs	0.34	9.29	6.80	0.86
Other	3.78	6.01	3.60	7.05

3.0 Discussion of key results

The detailed results presented in section 2.0 can be summarized to give the following key results:

Forest Service niche

- Forest Service recreation sites are heavily used by British Columbians. Forty-two percent of respondents to the telephone survey indicated they had used a Forest Service recreation site within the last five years.
- Forest Service recreation sites provide a specific niche within the spectrum of recreation facilities offered by various agencies in B.C. This niche can be described as low-keyed and rustic, but sometimes heavily used, sites without user fees.
- The Forest Service recreation program provides the public with a variety of recognized recreational opportunities. There is a need, however, for even greater variety in site design, landscape setting and recreational opportunities offered within that niche.

User satisfaction

- There is strong public support for Forest Service sites.
- There is a high level of user satisfaction with Forest Service sites where standards are met. However, there is dissatisfaction where standards are not met.
- Levels of satisfaction or dissatisfaction vary from site to site. Vandalism and rowdyism are serious problems at certain times (e.g., on long weekends) at certain sites (e.g., near urban centres).
- Social and environmental conditions (i.e. crowding, noise, and environmental degradation) are diminishing the satisfaction of a significant proportion of users at some sites. Approximately 30% of respondents, for example, indicated the behaviour of others caused them concern.
- During their last visit to a Forest Service site, most users achieved the type of experience they desired.
- Forest Service sites meet the recreational needs and expectations of many people. Certain factors, such as access, services and naturalness of surroundings, limit the amount of use sites receive. Low-use, however, does not necessarily mean a bad product if sites meet users' needs and expectations.

User preferences

- British Columbians using Forest Service sites are primarily seeking natural settings in which to relax and enjoy nature, rather than campsites with higher levels of services and facilities. There is a preference for 'rustic but clean' sites.
- There is a strong preference for no fees at Forest Service sites. The absence of fees is likely an important consideration when people choose to use a Forest Service site over a campground managed for a fee at a Provincial Park, National Park, or commercial campground.

Information requirements

- There is a demand for additional information about Forest Service sites, presented and distributed so it is readily available to the public.

4.0 Policy Implications

The key results presented in section 3.0 suggest the following policy implications:

- Forest Service recreation sites play a major role in the public's perception of the B.C. Forest Service. Strong public support for Forest Service recreation sites can benefit the entire Forest Service, particularly in view of present controversies over timber harvesting practices. The Forest Service has an opportunity to gain public support by providing 'rustic but clean' recreation sites in a variety of settings and by providing additional information on sites and recreation opportunities in provincial forests. On the other hand, poorly maintained and difficult to find recreation sites can lead to loss of public support for other Forest Service programs.
- Forest Service recreation sites should be designed and maintained according to their recognized niche. The distinction between Forest Service sites — low-keyed, rustic and no user fees — and facilities provided by other agencies (including Provincial and National Parks) should be maintained.
- Forest Service recreation sites should be planned and designed to provide greater diversity in site design, landscape setting and recreation opportunities. User preferences must be considered in designing, constructing and maintaining Forest Service sites if they are to meet the public's needs and expectations.
- Standards for Forest Service recreation sites should be maintained. To achieve high levels of user satisfaction, standards must be clearly defined and met in managing Forest Service sites.
- Rowdyism and vandalism must be addressed or public satisfaction and safety levels will diminish at some sites. An effective "visitor management program" is required at certain sites to deal with this problem.
- Forest Service recreation sites should be designed and located according to the public's preference for natural settings. The Forest Service should continue to provide only basic services and maintain sites to the standard of 'rustic but clean.'
- The introduction of fees for the use of Forest Service sites would cause major management problems, such as the relocation of use to surrounding public and private lands. It would also be contrary to the underlying purpose of the program.
- Supply and demand for Forest Service sites, as well as user satisfaction, should be assessed on an ongoing basis in each Forest District.

5.0 Methodology

5.1 Focus group meetings

Focus group meetings were held in four communities across British Columbia.

One meeting was held in the Vancouver area, and involved a number of provincial outdoor recreation organizations. The other meetings were held in Nanaimo, Prince George and Kelowna, and involved users and non-users of Forest Service recreation sites.

Focus group meetings are normally used to focus on specific topics. For this study, they were also used to obtain information that could assist in the development of a preference/satisfaction telephone survey.

Meeting participants made a number of suggestions regarding the type of questions that respondents could be requested to answer. These included:

- User conflict/enforcement
- Site capacity
- Access
- Communication
- Development preferences
- Willingness to pay
- Historical use.

Table 12: Preferences and dislikes related to outdoor recreation experiences, identified during focus group meetings:

Preferences	Dislikes
- Natural settings	- Lack of information
- Variety of activities	- Overuse of sites
- Variety of sites	- People monopolizing certain sites
- Free use of sites	- Abuse of sites
- Proximity to water	- Visual impact of logging and mining
- Rustic facilities	- Lack of greenbelts
- Patrols for rowdyism and vandalism	- Poor or inadequate maintenance
- Trails and day use areas	- Operation of four-wheel drive and all-terrain vehicles on or near sites
- Information regarding sites and attractions	- Excessive signing
- Clean, well-maintained sites	- Discharge of firearms on or near sites

5.2 Telephone Survey

B.C. residents were surveyed using a questionnaire designed by focus group meeting participants, as well as Recreation Branch staff. The following steps were undertaken:

1) Household Selection

The survey design consisted of telephone interviews with adult residents of British Columbia. A two-staged sampling approach was used to obtain a statistically reliable provincial sample, and a statistically reliable sub-sample of users of Forest Service recreation sites.

In stage one, approximately 800 respondents were randomly selected and interviewed, subject to the region, gender and age quotas. Tallies of users of Forest Service sites were recorded during this stage, since the incidence of users in the population was initially unknown. It should be noted that 44% of the respondents indicated they had used Forest Service sites within the last five years.

In stage two, the sample of respondents was augmented to yield a total sample of 404 users. In this stage, non-users were screened out, and 56 additional users were obtained.

The total sample of 848 respondents provided a confidence interval of plus or minus 3.4 percentage points 19 times out of 20. The sample of 442 non-users of Forest Service sites provided a confidence interval of plus or minus 4.7 percentage points 19 times out of 20. The sample of 404 users of Forest Service sites provided a confidence interval of plus or minus 5.0 percentage points 19 times out of 20.

Users were defined as respondents who reported a visit to a Forest Service recreation site. To ensure that respondents could accurately distinguish among Forest Service recreation sites and private, municipal, provincial or national park facilities, the interviewers read a description of Forest Service sites, detailing the characteristics that differentiate these facilities from other campgrounds.

A sampling frame was designed to randomly select a valid sample of respondents from the entire province. This sampling frame was based on a two-stage Mitofsky-Waksberg design as follows:

Stage 1: each working residential telephone number prefix for B.C. was identified, and information regarding the number of unique access lines within each prefix was obtained from the B.C. Telephone Company and the Dominion Directory Company. To increase the efficiency of the frame prefixes, those with a minimal number of unique access lines were omitted. (It is estimated that these prefixes contain less than 2% of the total population.) Prefixes were stratified using weights based on the number of unique access lines per prefix and the population for each of six geographical areas. (Population figures were determined from the 1986 Canada Census.)

The six geographical areas were the Greater Vancouver Regional District, the South Central Interior, the Kootenays, the North, Greater Victoria and the Islands, and North Vancouver Island. The boundaries of these areas were based on census tracts and the Forward Sortation Areas of postal codes.

Stage 2: telephone number suffixes (4 digit endings) were randomly generated. Blocks of non-working suffixes were determined from city directories and eliminated from the program parameters.

2) Questionnaire pre-test

The survey questionnaire was designed by PERC, in collaboration with Recreation Branch. The questionnaire was pre-tested by conducting fifteen pre-test interviews. Minor revisions were made as required.

3) Data collection

Interviewing took place in the offices of Points of View Research and Consulting between November 4 and December 12, 1990.

Table 13: Telephone Survey respondent profile

Age
The majority of respondents were between 25 and 64 years of age. The age of distribution of respondents was as follows:

Age	Percent of Sample
18-24 years	11.8%
25-34 years	24.1
35-44 years	21.9
45-54 years	15.6
55-64 years	15.9
65 years and over	10.6
Would not respond	00.1

Gender
48.7% of the respondents were male, and 51.2 % were female

Area of Residence	Percent of Population	Percent of Sample
Lower Mainland and Vancouver Island	72.9%	71.2%
Prince Rupert	2.9	2.7
Kamloops	11.4	10.5
Prince George	5.6	5.8
Nelson	5.2	6.6
Cariboo	2.0	2.7

Use of Forest Service sites
Of the people who reported using a Forest Service site in the past, 85.6% had done so within the past five years. Respondents between the ages of 25 and 44 were more likely to have used Forest Service sites than people in the other age groups.

Residents of the Lower Mainland and Vancouver Island were less likely to have used Forest Service sites than residents of other regions of the province.

Males were more likely to have used Forest Service sites than females.

5.3 Interagency workshop

A workshop was held in Victoria on March 7, 1991, with representatives of the B.C. Forest Service, BC Parks, the Ministry of Tourism, and the Outdoor Recreation Council of British Columbia to discuss the findings of the focus group meetings and the telephone survey.

During the workshop, the telephone survey results were presented and discussed. Participants suggested a number of interpretations of the results, as well as several policy implications, as discussed in Sections 3.0 and 4.0.

Workshop participants included:

B.C. Forest Service

Tom Hall
Manager
Recreation Section
Integrated Resources Branch

Ted Murray
Recreation Analysis Specialist
Recreation Section
Integrated Resources Branch

Doug Herchmer
Regional Recreation Officer
Vancouver Forest Region

Bernie Ivanco
Regional Recreation Officer
Champs Forest Region

Luc Roberge
Regional Landscape Officer
Prince George Forest Region

Ken Balaski
Regional Staff Manager
Williams Lake Forest Region

Jim Snetsinger
Regional Staff Manager
Prince Repeat Forest Region

Robin Webb
Recreation Resource Officer
Horsefly Forest District

Dave Francis
Planning/Recreation Resource Officer
Morice Forest District

Graham Seefeldt
Recreation Resource Officer
Alexis Creek Forest District

BC Parks

George Broome
Operations Officer - Visitor Services
Victoria

Outdoor Recreation Council of British Columbia

Bob Peart
Executive Director
Vancouver

Ministry of Tourism and Ministry responsible for Culture

Frank Hussey
Manager
Sport Fishing/Resort Development
Victoria

Professional Environmental Recreation Consultants (PERC)

Bill Webster/Rick Rollins
Surrey